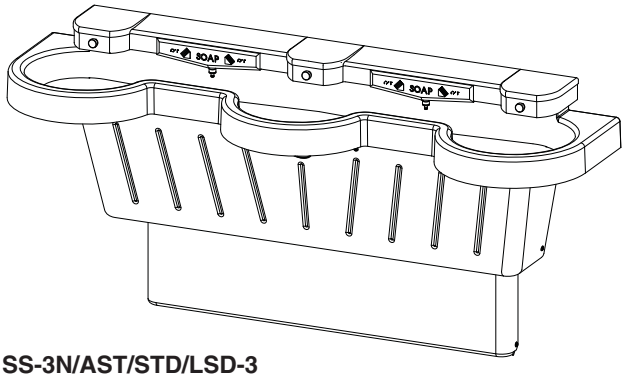
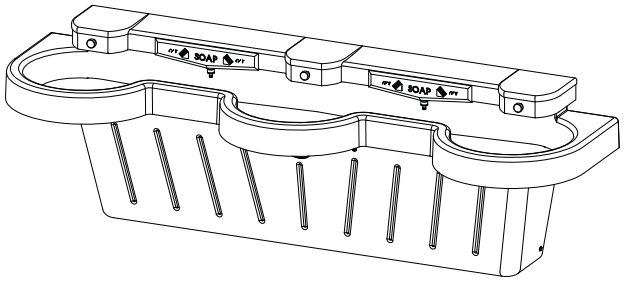


SS-3N/AST/STD/LSD-3



SS-3N/AST/WH/LSD-3

Installation

SS-3N/AST/STD
SS-3N/AST/WH

ADA COMPLIANT

Express® Lavatory System SS-Series

Express Lavatory Systems are ADA and TAS compliant

Table of Contents

Pre-Installation Information 2
Components. 3
Supplies Required 4
Dimensions. 4–5
Rough-Ins. 6
Installation 7–10
Metering Air Valve Troubleshooting 11
Vernatherm Mixing Valve Troubleshooting 12
Stop/Check Valve Troubleshooting. 13
Cleaning and Maintenance for Terreon® 13
Soap Dispenser Maintenance 14

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P.O. Box 309, Menomonee Falls, WI 53052-0309
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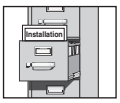
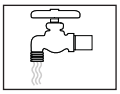
www.bradleycorp.com

IMPORTANT!

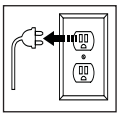


Read this entire installation manual to ensure proper installation. When finished with the installation, file this manual with the owner or maintenance department. Compliance and conformity to local codes and ordinances is the responsibility of the installer.

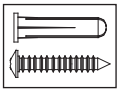
Separate parts from packaging and make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not begin installation until you obtain the missing parts.



Make sure that all water supply lines have been flushed and then completely turned off before beginning installation. Debris in supply lines can cause valves to malfunction.



Turn OFF electrical power to the electrical outlets, then unplug all electrical units prior to installation. Electrical power MUST remain off until unit and optional water heater have been plumbed. After installation is complete, turn on the water supply first, then turn on the electrical power.

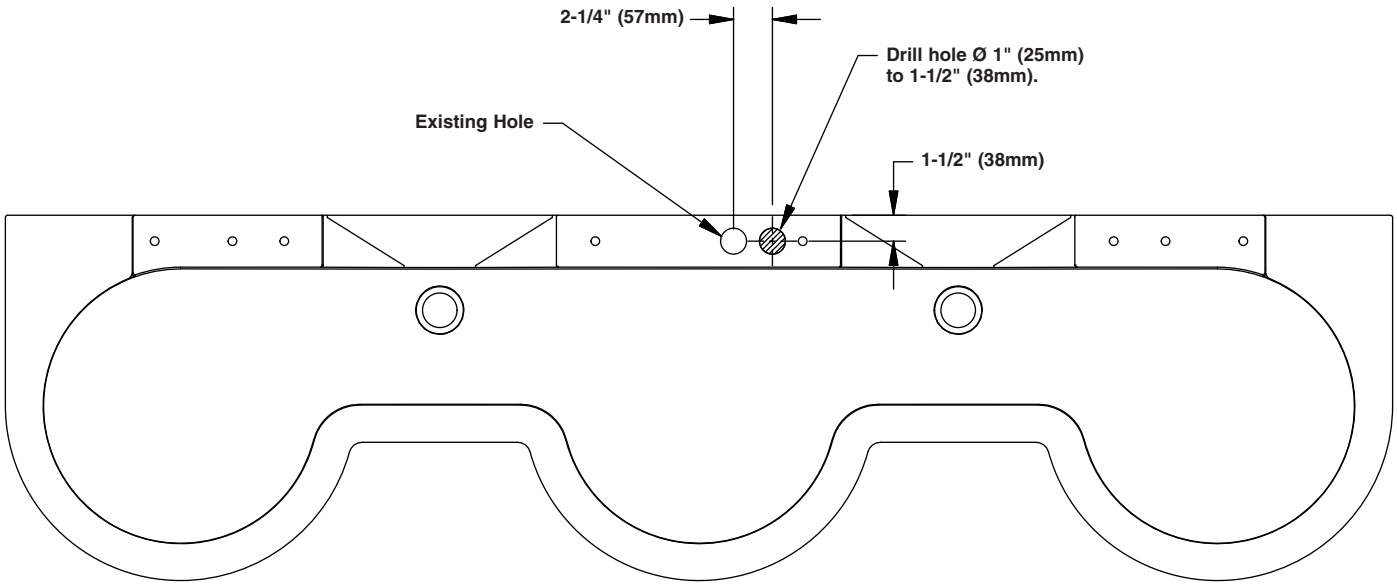


Hardware supplied by installer must be appropriate for wall construction. Wall anchors must have a minimum pull-out rating of 1,000 lbs. Follow appropriate dimensions for standard or juvenile height based on configuration and required rim height. Overtightening fasteners can damage the Terreon® material. Use caution when tightening bowl and sprayhead fasteners.

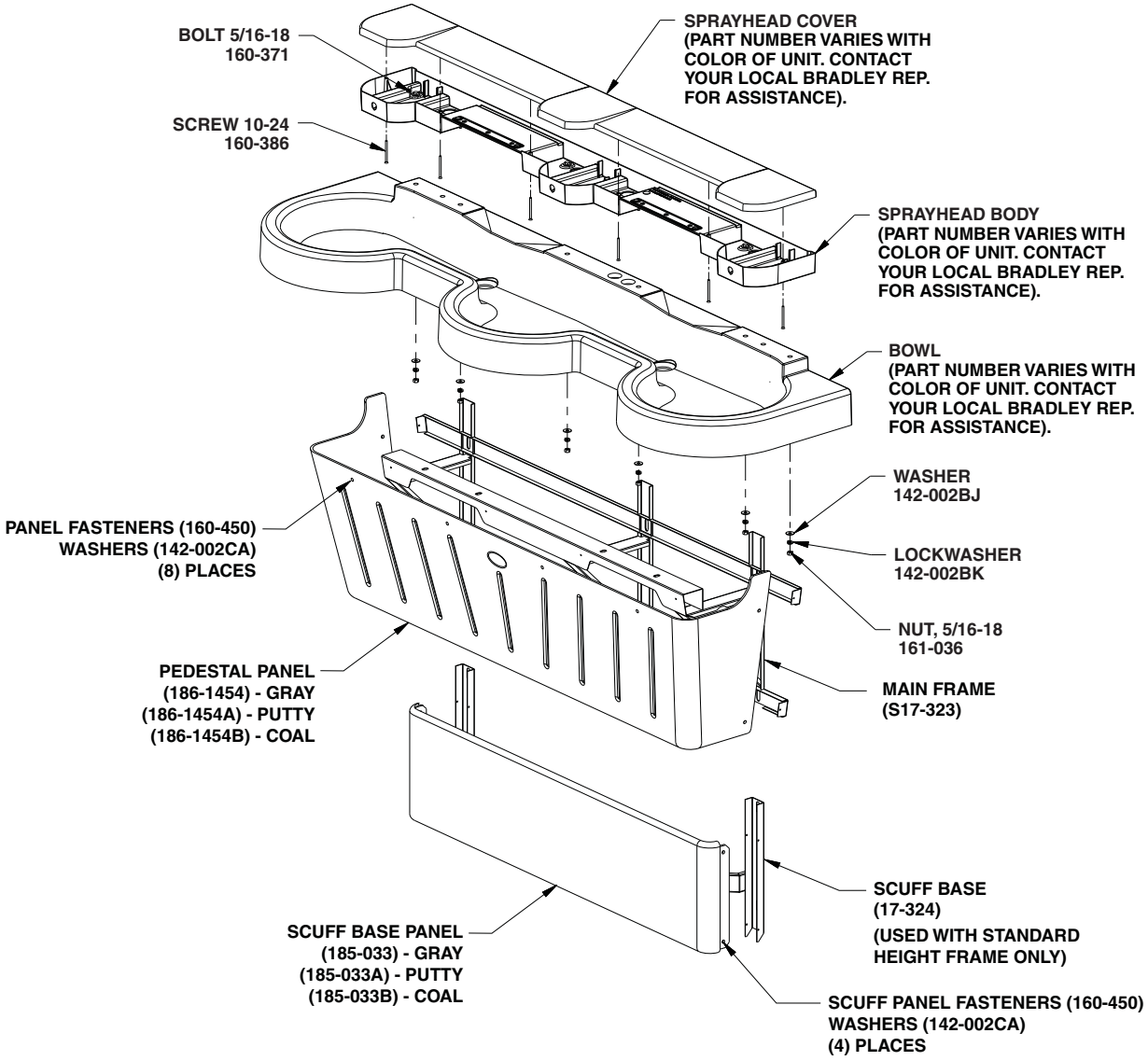
Product warranties may be found in the "Products" section on our Web site at www.bradleycorp.com.

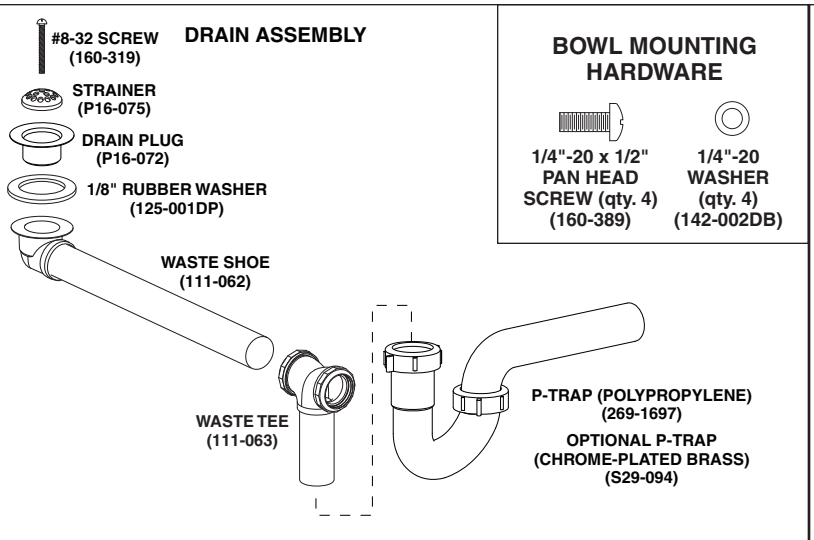
Special Note for Sprayhead/Bowl retrofit

to retrofit new SS-3N sprayhead onto existing SS-3 bowl

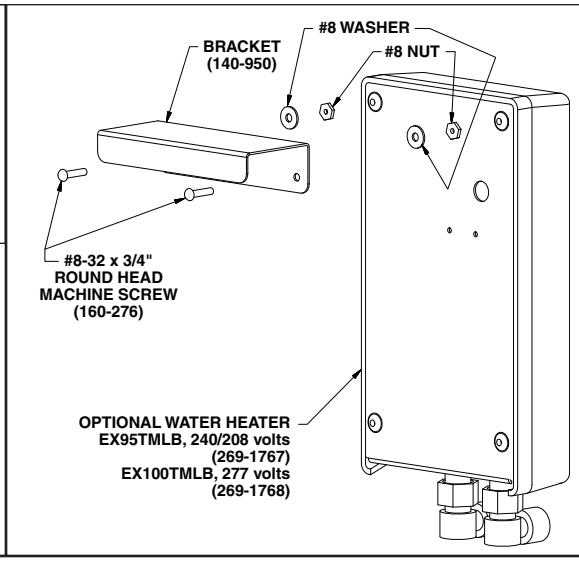


Components


BOLT 5/16-18
160-371
SCREW 10-24
160-386
SPRAYHEAD COVER
(PART NUMBER VARIES WITH COLOR OF UNIT. CONTACT YOUR LOCAL BRADLEY REP. FOR ASSISTANCE).
SPRAYHEAD BODY
(PART NUMBER VARIES WITH COLOR OF UNIT. CONTACT YOUR LOCAL BRADLEY REP. FOR ASSISTANCE).
BOWL
(PART NUMBER VARIES WITH COLOR OF UNIT. CONTACT YOUR LOCAL BRADLEY REP. FOR ASSISTANCE).
WASHER
142-002BJ
LOCKWASHER
142-002BK
NUT, 5/16-18
161-036
PANEL FASTENERS (160-450)
WASHERS (142-002CA)
(8) PLACES
PEDESTAL PANEL
(186-1454) - GRAY
(186-1454A) - PUTTY
(186-1454B) - COAL
MAIN FRAME
(S17-323)
SCUFF BASE
(17-324)
(USED WITH STANDARD HEIGHT FRAME ONLY)
SCUFF BASE PANEL
(185-033) - GRAY
(185-033A) - PUTTY
(185-033B) - COAL
SCUFF PANEL FASTENERS (160-450)
WASHERS (142-002CA)
(4) PLACES


DRAIN ASSEMBLY
#8-32 SCREW
(160-319)
STRAINER
(P16-075)
DRAIN PLUG
(P16-072)
1/8" RUBBER WASHER
(125-001DP)
WASTE SHOE
(111-062)
WASTE TEE
(111-063)
P-TRAP (POLYPROPYLENE)
(269-1697)
OPTIONAL P-TRAP
(CHROME-PLATED BRASS)
(S29-094)

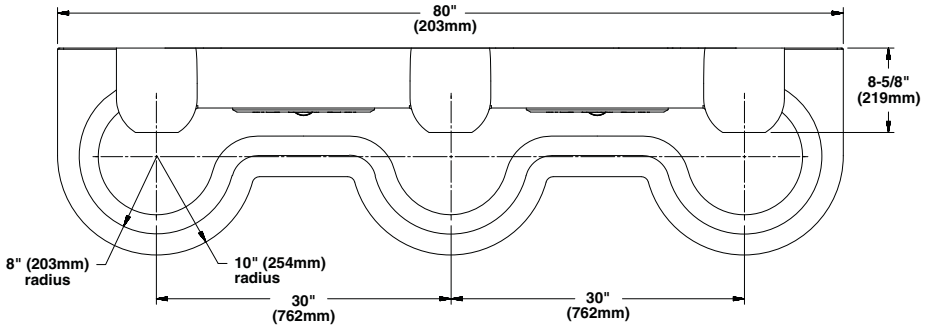
BOWL MOUNTING HARDWARE
1/4"-20 x 1/2"
PAN HEAD
SCREW (qty. 4)
(160-389)
1/4"-20
WASHER
(qty. 4)
(142-002DB)

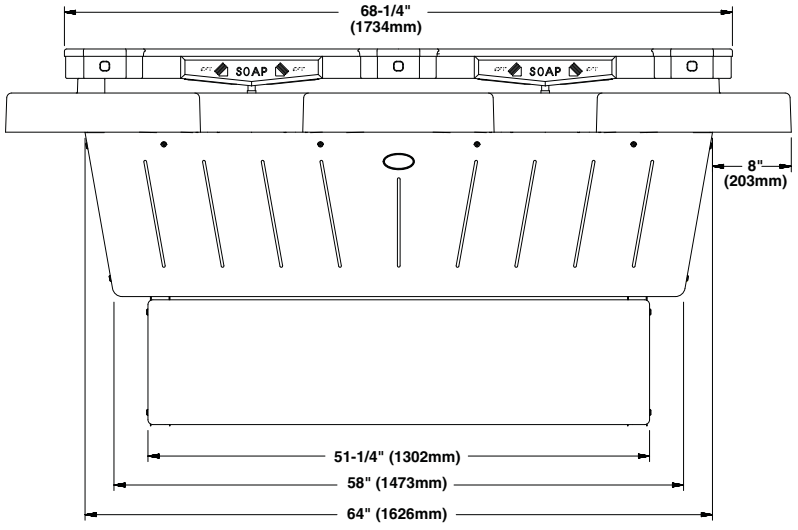

#8 WASHER
BRACKET
(140-950)
#8 NUT
#8-32 x 3/4"
ROUND HEAD
MACHINE SCREW
(160-276)
OPTIONAL WATER HEATER
EX95TMLB, 240/208 volts
(269-1767)
EX100TMLB, 277 volts
(269-1768)

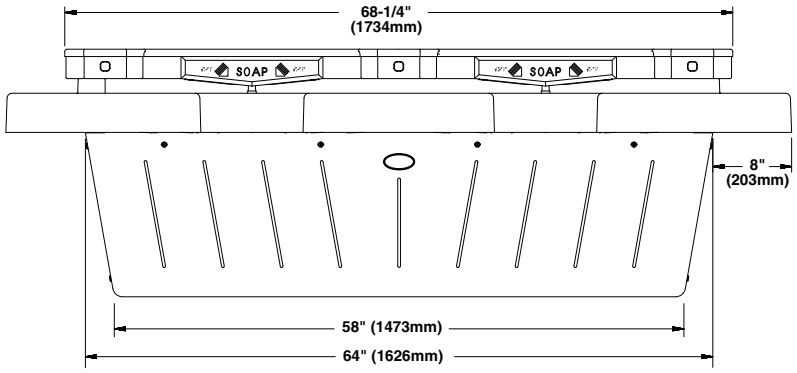
Supplies Required:

- (8) 3/8" wall anchors, bolts and 1" min. O.D. washers to mount main frame and bowl to wall (minimum pull-out rating of 1,000 lbs.)
- STD. HEIGHT ONLY: (2) 3/8" wall anchors, bolts and 1" min. O.D. washers to mount scuff base to wall
- 1/2" NPT hot/cold or tempered supply piping and 1-1/2" NPT drain piping
- (2) 1/2" NPT street elbows
- OPTIONAL: 240/208-volt or 277-volt electrical box for electric tankless water heater

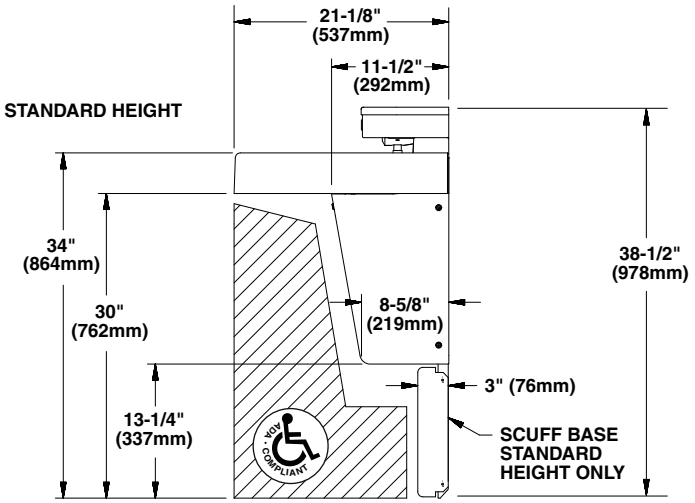
Dimensions - Front and Top Views

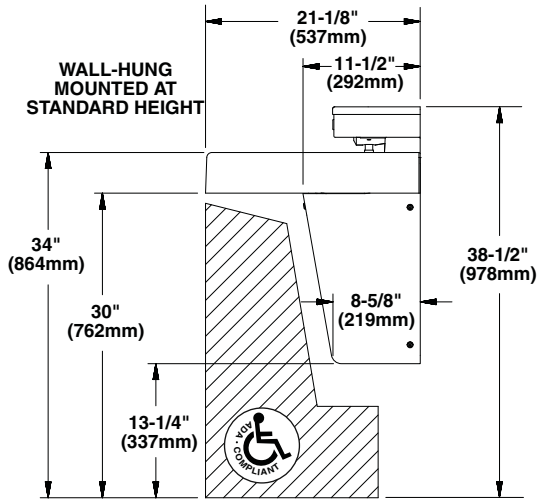


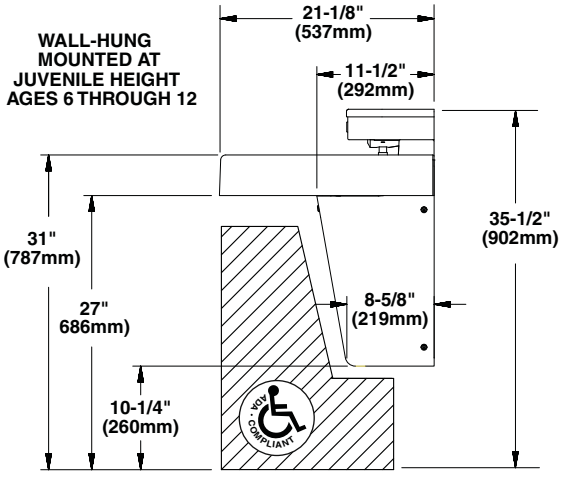


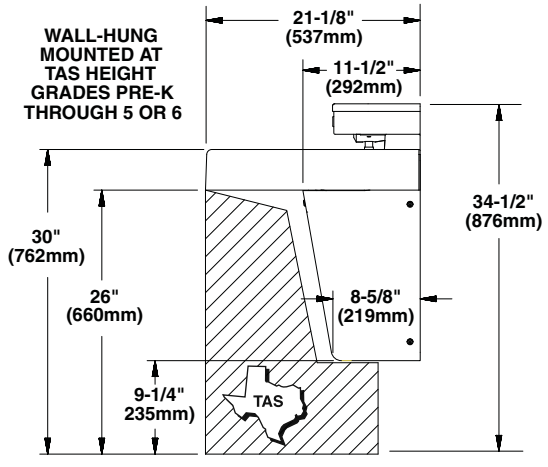


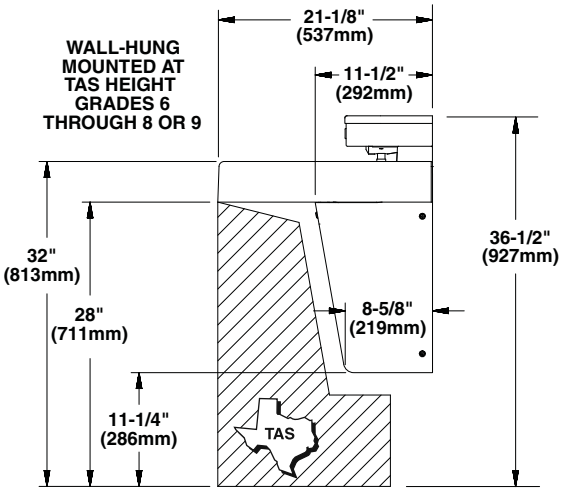
Dimensions - Side Views



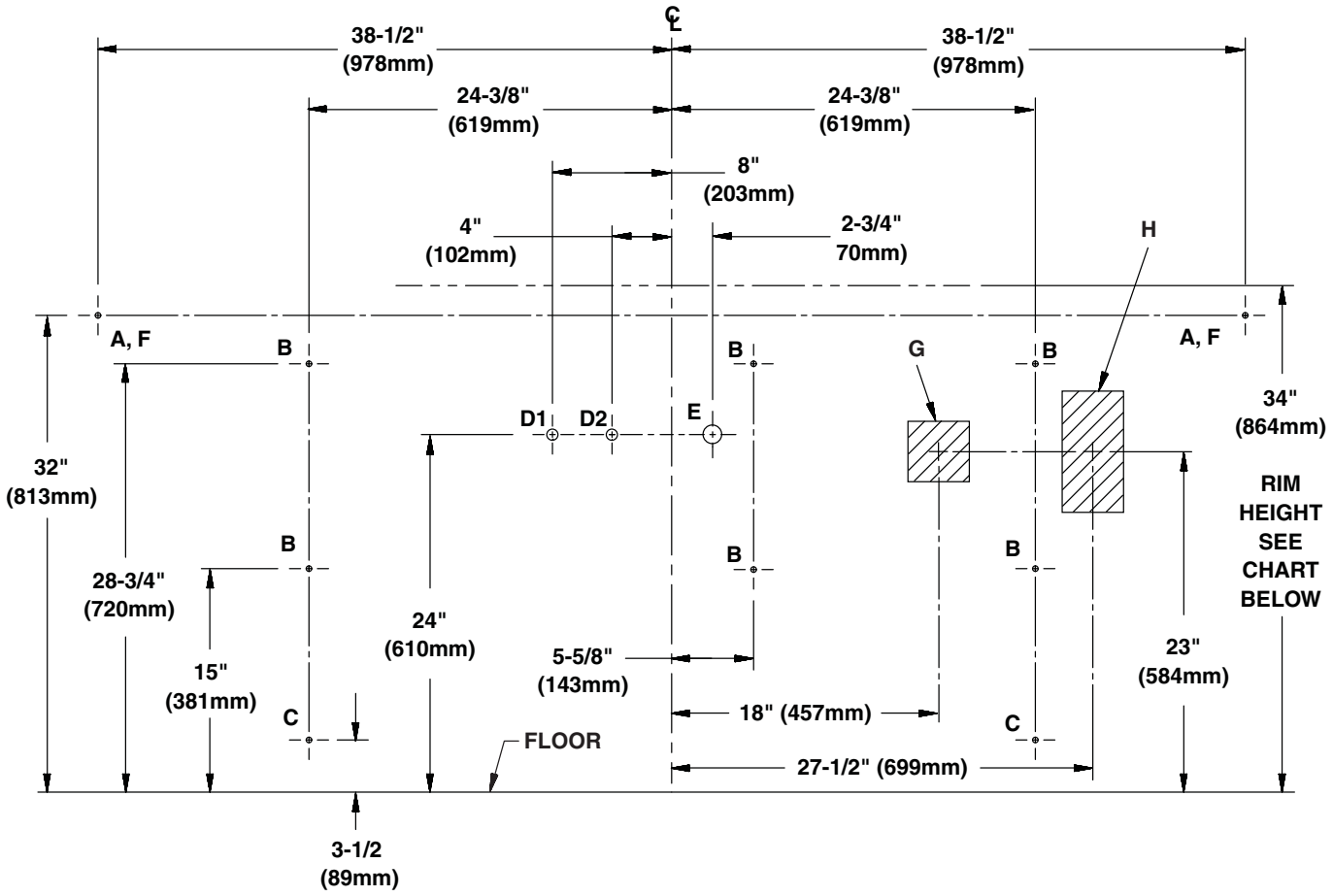








1 Rough-Ins

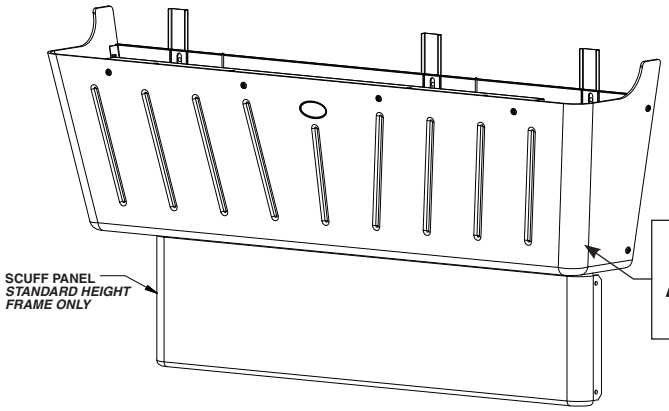


CODE	DESCRIPTION	QTY.
A	3/8" Wall Anchors with a minimum pull-out force of 1,000 lbs. for Bowl	2
B	3/8" Wall Anchors with a minimum pull-out force of 1,000 lbs. for Mainframe	6
C	3/8" Wall Anchors for Base Frame, Standard Frame option only, minimum pull-out force not required	2
D1	1/2" NPT Cold Supply, stub-out 2" from wall	1
D2	1/2" NPT Hot or Tempered Supply, stub-out 2" from wall	1
E	1-1/2" NPT Drain, stub-out 2" from wall	2
F	On the bowl back, measure the distance between the 3/4" bowl mounting holes. Divide this measurement in half. Measure and mark this dimension on the wall to the left and the right of the centerline. Install two 3/8" wall anchors with a minimum pull-out rating of 1,000 lbs (supplied by installer) at locations marked.	2
G	Water Heater Option #1: Rough-in appropriate electrical supply per local code (recommended location for 240/208v or 277v electrical box [4" long x 4" wide x 8" high] shown)	1
H	Water Heater Option #2: Rough-in appropriate electrical supply per local code (recommended location for 240/208v or 277v electrical box [4" long x 4" wide x 4" high] shown)	1

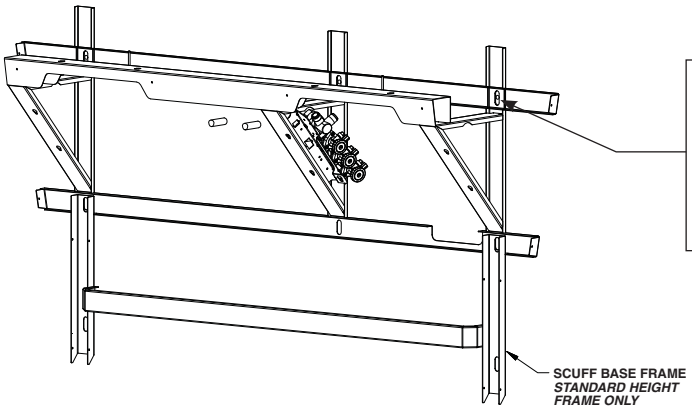
RIM HEIGHT	VERTICAL HEIGHT ADJUSTMENTS FOR CODES A–E, H, C and W	FIXTURE STYLE
34"	None	Standard Height
34"	None	Wall-Hung
32"	Subtract 2"	TAS, Grades 6 through 8 or 9
31"	Subtract 3"	Juvenile Height
30"	Subtract 4"	TAS, Pre-K through Grades 5 or 6

2 Mount Frame to Wall

Anchoring the frame to a wall that is not flat may cause the frame to bend, making it difficult to reinstall the access panels. If necessary, use shims to compensate for wall distortion.



A Using a T20 torx key, remove the fasteners securing the access panel to the main frame, and remove the panel.



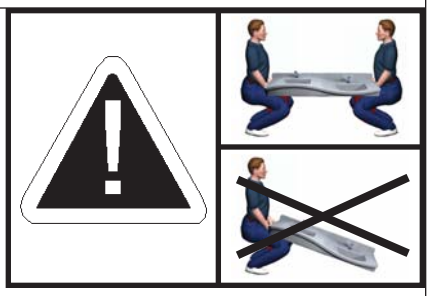
B Once you have positioned the frame such that it is level and flat against the wall or shimmed, mount the frame to the wall at six places using 3/8" bolts and 1" min. O.D. washers.

NOTE: When mounting the standard height frame, mount the scuff base to the wall at the same time using two additional 3/8" bolts and washers.

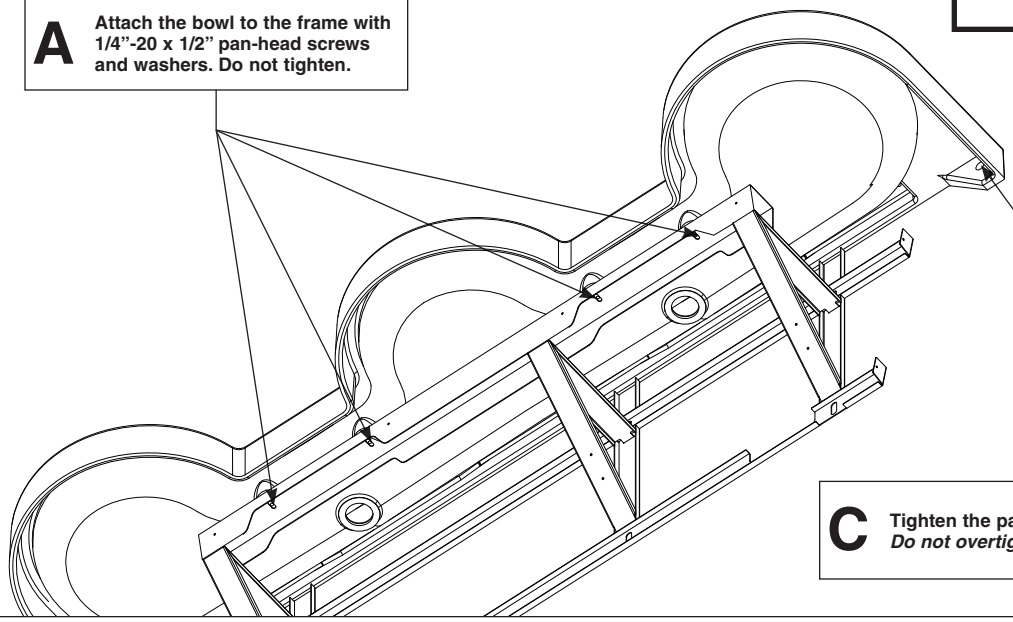
3 Install Bowl

The sprayhead body has slotted holes for adjusting the fit-up with the bowl and wall.

For clarity, the scuff base frame and drain are not shown. Turn the tailpiece down to its proper position before installing the bowl.



A Attach the bowl to the frame with 1/4"-20 x 1/2" pan-head screws and washers. Do not tighten.

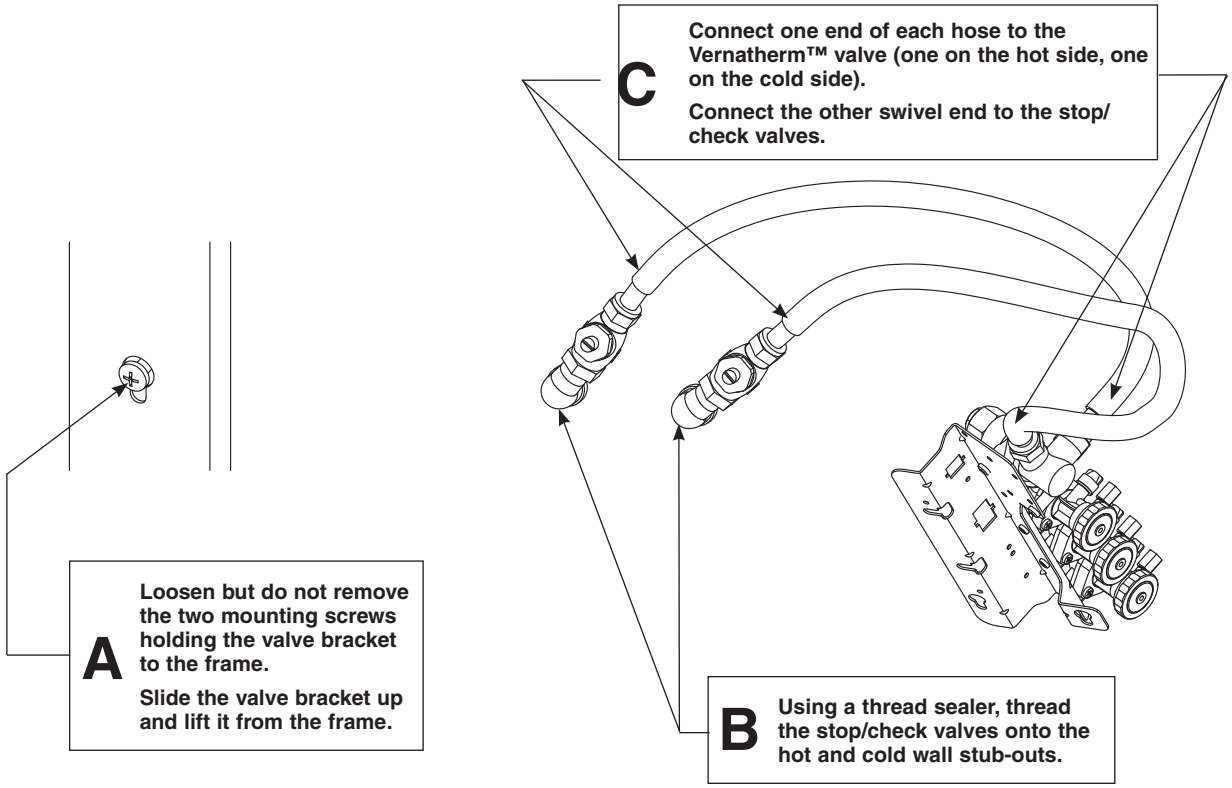


B Secure the bowl to the wall anchors with 3/8" bolts and 1" min. O.D. washers, two places. *Do not overtighten.*

C Tighten the pan-head screws *Do not overtighten.*

4a Connect the Supply — Hot and Cold Supply

The letter "H" on the Vernatherm™ Mixing Valve indicates hot water supply inlet.



A Loosen but do not remove the two mounting screws holding the valve bracket to the frame.

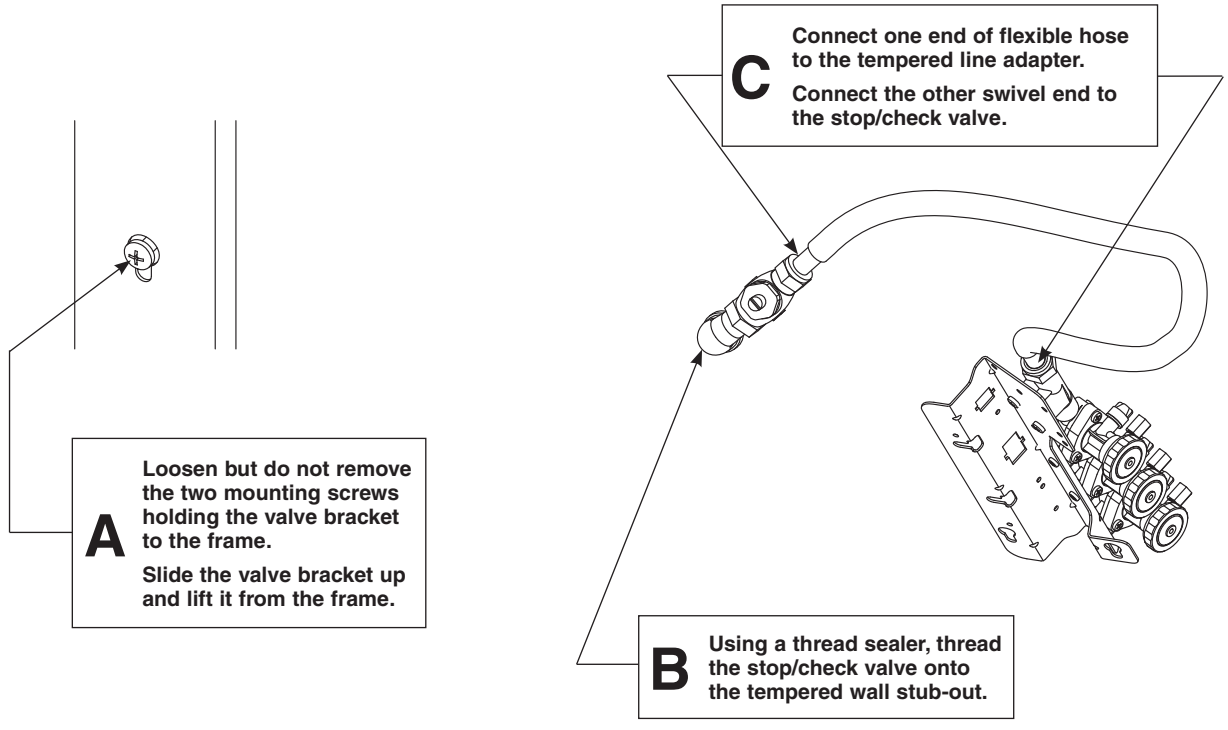
Slide the valve bracket up and lift it from the frame.

B Using a thread sealer, thread the stop/check valves onto the hot and cold wall stub-outs.

C Connect one end of each hose to the Vernatherm™ valve (one on the hot side, one on the cold side).

Connect the other swivel end to the stop/check valves.

4b Connect the Supply — Single Tempered Supply



A Loosen but do not remove the two mounting screws holding the valve bracket to the frame.

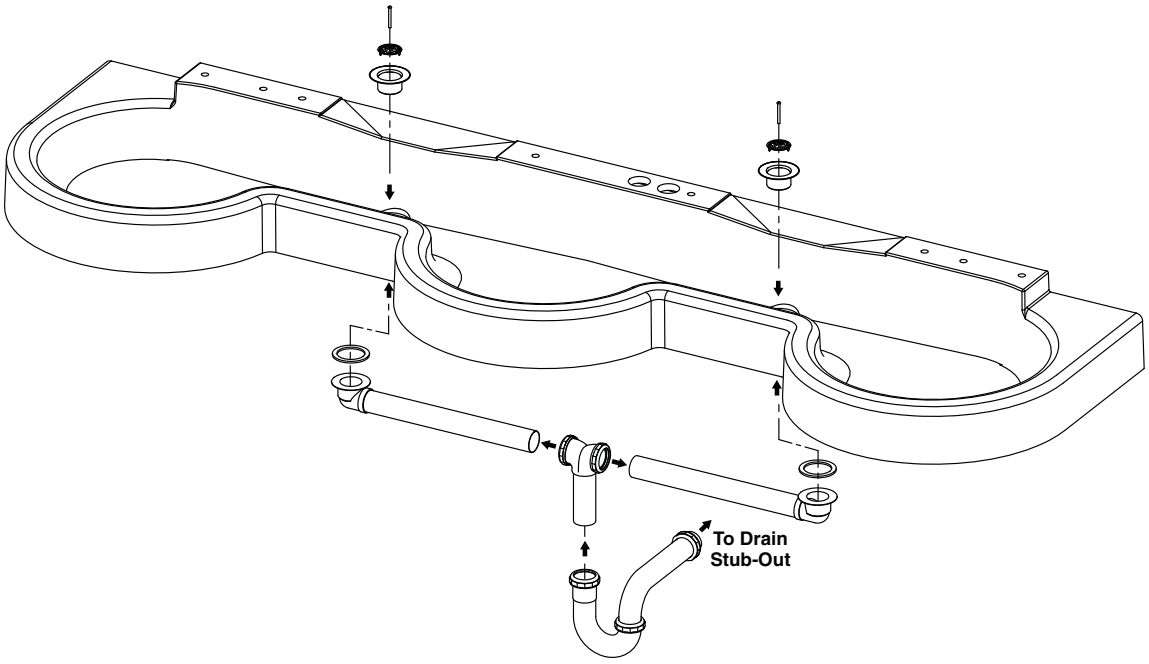
Slide the valve bracket up and lift it from the frame.

B Using a thread sealer, thread the stop/check valve onto the tempered wall stub-out.

C Connect one end of flexible hose to the tempered line adapter.

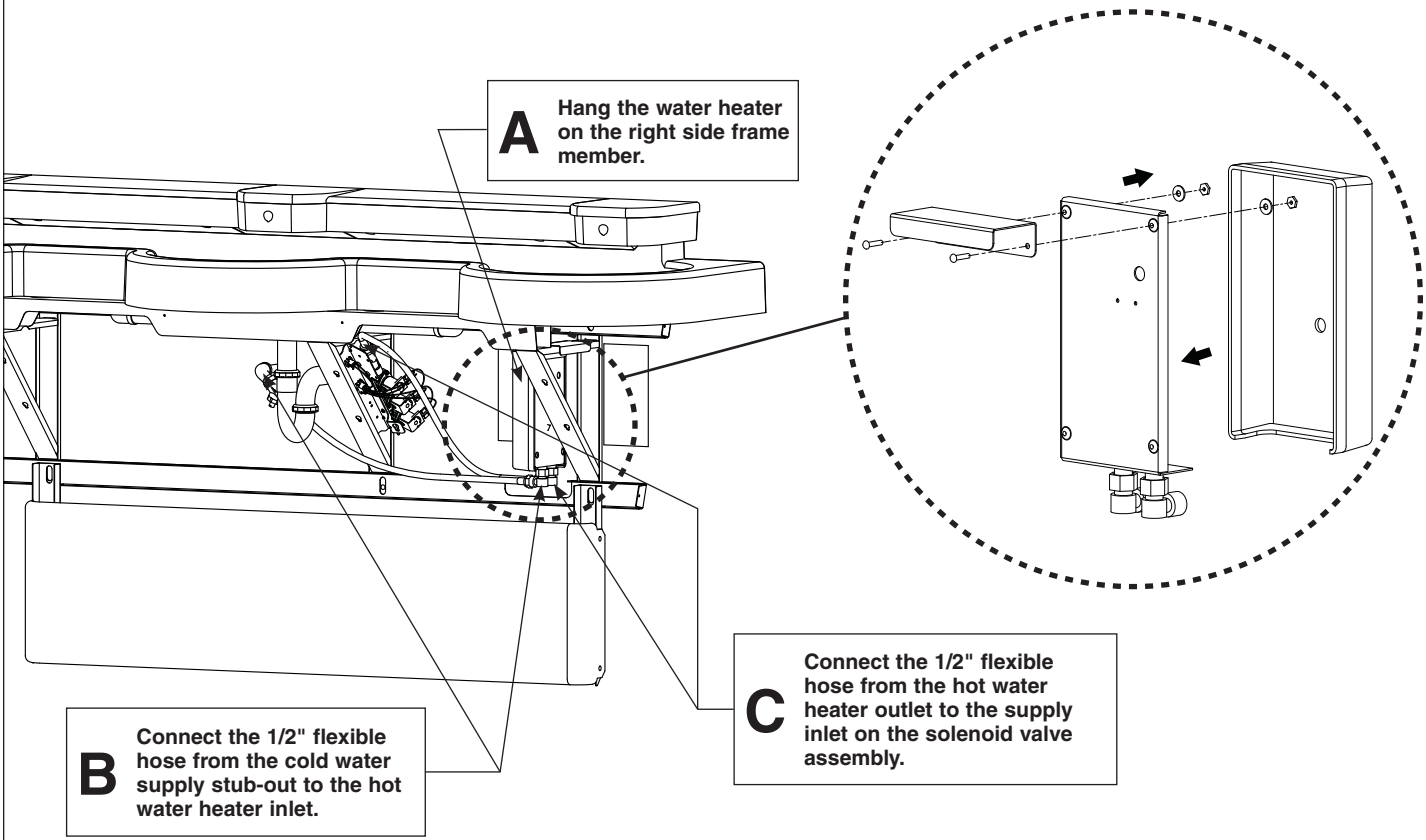
Connect the other swivel end to the stop/check valve.

5 Install the Drains

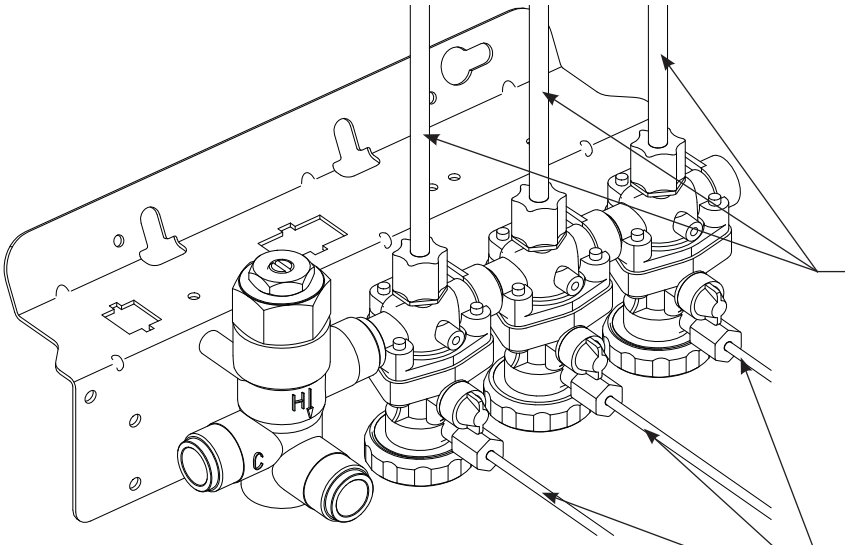


6 Optional Electric Tankless Water Heater

240/208 or 277 voltage is required for hot water heater. Refer to the installation manual provided with the hot water heater for further installation information.


A Hang the water heater on the right side frame member.
B Connect the 1/2" flexible hose from the cold water supply stub-out to the hot water heater inlet.
C Connect the 1/2" flexible hose from the hot water heater outlet to the supply inlet on the solenoid valve assembly.

7 Connect Supply and Tubing



A **Loosen the compression nuts.**
Push the sprayhead supply tubes firmly into the tube connectors until they are fully seated.
Tighten the compression nuts by hand.

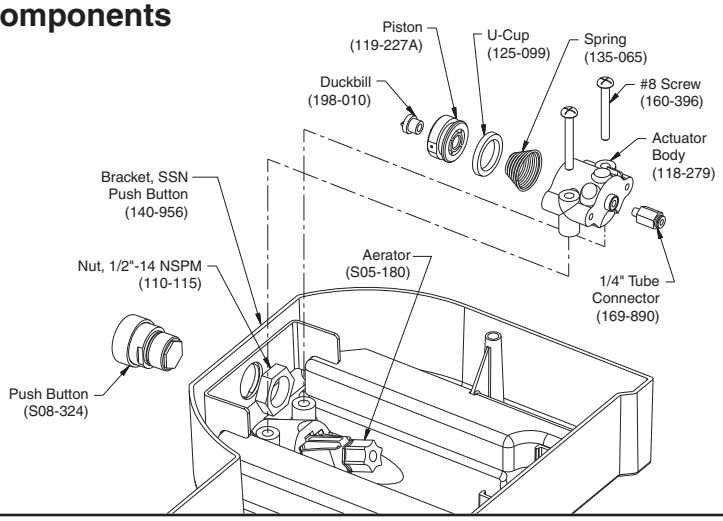
B **Loosen the compression nuts.**
Push the matching color 1/8" tubes firmly into the tube connectors until they are fully seated.
Tighten the compression nuts by hand.

C **Reinstall the valve bracket. Turn on the water supply to the Express® and check for leaks. Push the operating buttons of each station until all the air is purged from the lines and water is flowing smoothly. Reinstall the access panel.**

Push Button Assembly

- **To access push button assembly:** Remove the Phillips-head screws located in the bottom of the sprayhead body and lift the Terreon cover/shelf off.
- **To reinstall sprayhead cover/shelf:** Position the cover/shelf on the sprayhead body and secure it to the sprayhead body using the screws provided.

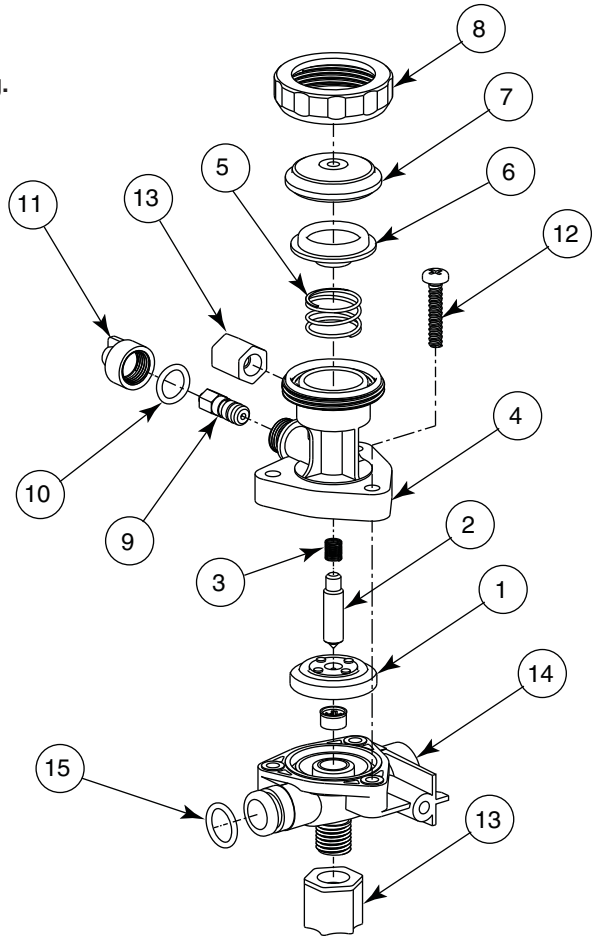
Sprayhead Components



Troubleshooting – Metering Air Valve

Turn off water supplies to the unit before troubleshooting.

Item	Qty.	Description
1	1	Diaphragm
2	1	Armature
3	1	Spring
4	1	AST 4 Valve Upper Body
5	1	Spring
6	1	Magnet/Diaphragm Assembly
7	1	AST 4 Valve Cover
8	1	AST 4 Valve Clamp Nut
9	1	AST 4 Valve Timer Assembly
10	2	O-Ring
11	1	AST 4 Valve Timer Cover
12	3	Screw, #8 x 7/8"
13	1	Compression Nut, 1/8" Tube
14	1	Compression Nut, 1/4" Tube
15	1	O-Ring



Problem	*Cause*	*Solution*
Valve will not shut off.	Timing mechanism is clogged.	Clean and inspect timing mechanism: 1. If compressed air is available, blow water and debris from timer cover of timing mechanism. 2. Turn adjusting screw out all the way. Clean and inspect screw and valve body. 3. Turn adjusting screw in to desired cycle time.
Valve will not turn on.	Water is not being supplied to unit.	Open all stops on mixing valve.
	Water pressure is over 80 PSI.	Install a pressure reducing valve.
	Failed diaphragm/ magnet assembly.	Unscrew the valve clamp nut on valve. Remove valve cover. Gently press the diaphragm. The valve should activate. If not, replace the diaphragm/magnet assembly.
Timing can not be adjusted for more than 5 seconds.	There is an air leak.	Check the valve assembly: 1. Check all tubing and fittings for proper assembly. 2. Tighten cap and nut on 1/8" tubing.
Pushbutton does not work properly.	Air volume may not be sufficient to operate valve.	Check for leaks and lubricate U-cup: 1. Check all fittings for air leaks. 2. Disassemble pushbutton and lubricate U-cup seal (see pushbutton assembly diagram on page 9).
Water is dripping from the streamformers.	Debris has accumulated on valve seat or orifices.	Clean and inspect valve seat: 1. Remove screws and disassemble metering valve. 2. Clean valve seat and inspect for deep gouges or scratches. Replace valve body if necessary. 3. Remove any debris clogging off-center hole in rubber diaphragm.

Troubleshooting – Vernatherm™ Thermostatic Mixing Valve: Part no. S01-524

Before attempting to troubleshoot the valve or disassemble the components, check for the following conditions:

- **If stop/check valves are used, make sure that they are fully open.**
- **Make sure that the hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop/check valves.**
- **Make sure water heater output is at least 20° F above the set temperature.**

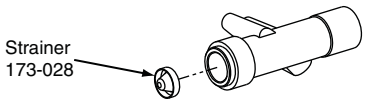
Close shut-off valves prior to disassembly and reopen the valves after inspection and repair is complete.

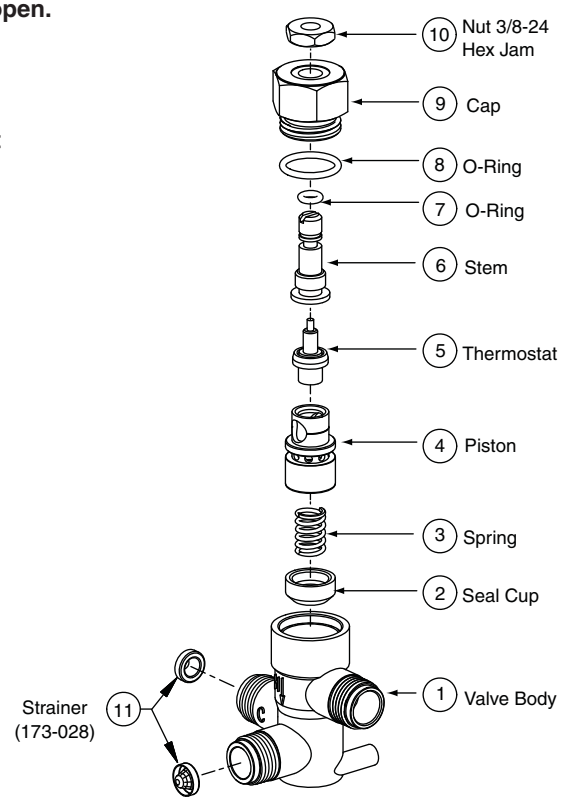
Repair Kit S65-259

Item	Qty.	Description
5	1	Thermostat
7	1	O-Ring
8	1	O-Ring

Tempered Line Adapter Option: Part no. S39-685

(replaces S01-524 if tempered line is used)





Problem	*Cause*	*Solution*
External leaks in the system.	*O-rings have been damaged.*	Replace O-rings. Contact your Bradley representative to order Repair Kit no. S65-259.
Improper water temperature or temperature fluctuation.	*Thermostat is slowly failing or not working at all.*	Check the thermostat for proper operation: 1. At room temperature (80° F or less) remove the cap and thermostat. 2. Place the thermostat into a container with 115° F water. The pushrod should pop out of the thermostat approximately 1/10". If pushrod does not pop out, replace the thermostat. Contact your Bradley representative to order Repair Kit no. S65-259.
	Valve temperature is not properly set	Adjust the temperature using a blade screwdriver: Turn the adjustment stem counterclockwise to increase the temperature or clockwise to decrease the temperature.
Limited water flow.	*Dirt and debris have built up in the valve or strainer.*	1. Ensure hot and cold supplies are connected to the mixing valve and that they have sufficient water flow. 2. Remove and clean the strainer. If it needs to be replaced, Contact your Bradley representative to order Bradley part no. 173-028. 3. Check the piston for smooth movement: A. Remove the valve's cap and thermostat. B. Push down on the piston; if the piston does not move freely, clean it as outlined below: • Remove the thermostat. Lift the piston out with a needle-nose pliers and remove the spring. • Any brass and stainless steel cleaner may be used. If a suitable cleaner is insufficient to remove debris, use a 400-grit sandpaper to polish and hone the piston and valve body). • Snap the spring into the piston (it will detent); reassemble into the valve body. Retest the piston. C. If, after a thorough cleaning, the piston does not move freely, the piston must be replaced. Contact your Bradley representative to order Repair Kit no. S65-259.

Stop/Check Valve Troubleshooting

Problem	*Cause*	*Solution*
Water dribbles or does not flow from the sprayhead.	Stop/Check Valves may not be functioning properly.	1. Close the stops and inspect the valves that supply water to the lavatory system. 2. Inspect the stop/check valves to see that they have been properly installed. 3. Remove the flexible hoses from the stop/check valves and inspect the strainers. Clean strainers, if necessary.
Sprayhead delivers ONLY hot OR cold water.	Stop/Check Valves may not be functioning properly.	1. Close the stops and inspect the valves that supply water to the lavatory system. 2. Inspect the stop/check valves to see that they have been properly installed. 3. Remove the flexible hoses from the stop/check valves and inspect the strainers. Clean strainers, if necessary. 4. Inspect the thermostatic mixing valve for proper installation and connection to hot and cold supplies.

Cleaning and Maintenance for Terreon®

Material Description: Terreon® is an NAHB Certified densified solid surface material composed of polyester resin and is resistant to chemicals, stains, burns and impact. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives.

Routine Cleaning: Clean daily or as often as conditions require using a standard commercial or household cleaner such as Formula 409® or Windex®.

Stubborn Stains: Remove tough stains with Ajax®, Comet®, or Soft-Scrub® and a green Scotch-Brite® pad or lightly sand in a circular motion with 240 grit wet/dry sandpaper. The finish can be renewed with a maroon Scotch-Brite® pad.

Special Situations for Material

Scratches: Remove scratches with a green Scotch-Brite® pad. The finish can then be renewed with a maroon Scotch-Brite® pad, followed by a white Scotch-Brite® pad or 30-micron sandpaper.

Hard Water Deposits: Remove hard water deposits with a mild solution of vinegar and water. Always rinse the unit thoroughly after cleaning.

Restoring the surface: Use Hope's® Solid Surface cleaner and polish to refresh and protect the Terreon® Solid Surface material. Bradley recommends additional care and maintenance for the darker colored Terreon®, for complete instructions on this additional maintenance refer to Bradley technical document #1505.

Do not use strong acid or alkaline chemicals and cleansers to clean Terreon®. If these chemicals come in contact with the surface, wipe them off immediately and rinse with soapy water. Avoid contact with harsh chemicals such as paint remover, bleach, acetone, etc. Avoid contact with hot pans and objects.

Repair Kits: Terreon® repair kits are available. Contact your Bradley representative or distributor for part numbers and pricing Repair kits are made to order and have a shelf life of 30 days.

Terreon® is a unique, cast solid surface material. Aggregate flow and distribution as well as shades of color can vary from product to product creating natural characteristics.

Brand Names: Use of brand names is intended only to indicate a type of cleaner. This does not constitute an endorsement, nor does the omission of any brand name cleaner imply inadequacy. Many products named are regional in distribution, and can be found in local supermarkets, department and hardware stores, or through your cleaning service. It is emphasized that all products should be used in strict accordance with package instructions.

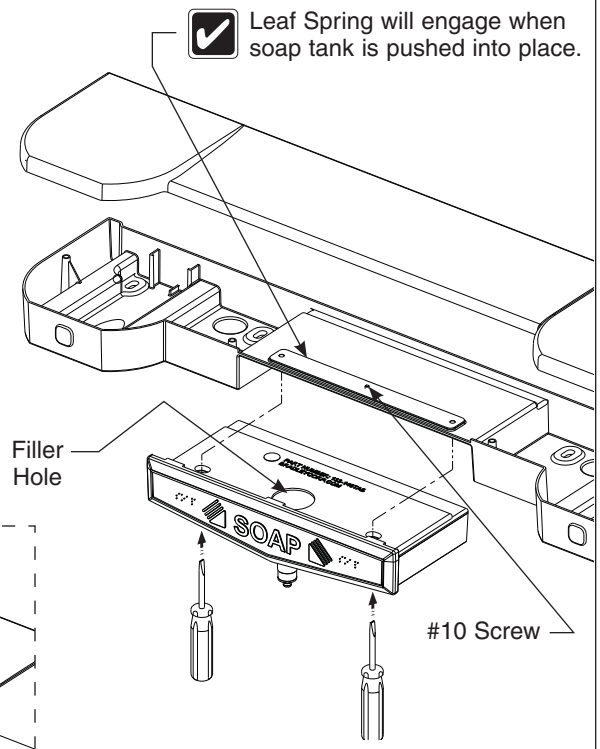
Fill Soap Dispenser

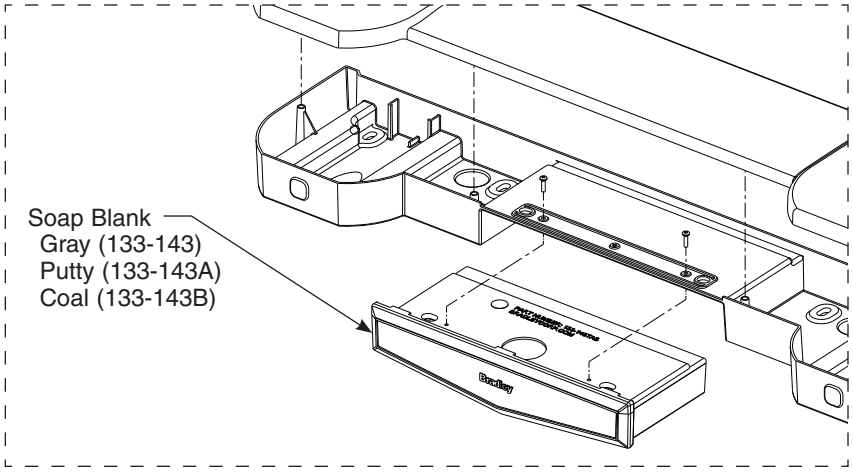
The soap valve will dispense vegetable/coconut oil liquid soaps, synthetic detergents, viscous lotion soaps, and antiseptic solutions. A 10-15% concentration is recommended for vegetable or coconut oil liquid soaps. Before filling, rinse out each soap tank with hot water to remove packing dust. Shake water out thoroughly and allow to dry. DO NOT OVERFILL!

Soap Tank Kits

S65-291 (Gray) includes:	S65-291A (Putty) includes:	S65-291B (Coal) includes:
Gray Tank w/Valve (S11-220)	Putty Tank w/Valve (S11-220A)	Coal Tank w/Valve (S11-220B)
Leaf Spring (S39-350)	Leaf Spring (S39-350)	Leaf Spring (S39-350)
Screw (160-385)	Screw (160-385)	Screw (160-385)

Soap Valve Repair Kit (S65-258) (includes Nut, Spring, Washer and Plunger)





Clean Soap Dispenser

Do not use abrasive cleansers to clean the soap tank. Abrasive cleaners can damage the surface.

Regular cleaning of the soap dispenser is recommended to ensure optimum performance and maximum service life. Cleaning the soap dispenser monthly to remove soap residue, dirt, and other accumulations should become a regular part of your washroom cleaning routine and general maintenance program.

Clean exterior: Use warm water and soap to clean the exterior of the soap dispenser. Dry with a soft cloth.

Clean interior: Inspect the interior of the tank for residue or coagulation of soap. If necessary, clean the tank according to the following procedure:

1. Pour out any remaining soap in the tank.
2. Full the tank half-full of hot water and shake the tank to dislodge the soap residue.
3. Empty the water from the container and repeat steps 1 and 2 until the soap container is clean.

If rinsing alone does not remove the soap residue, place a small chain (24 inches long) into the tank with hot water and shake the container until the chain dislodges the residue. Then remove the chain and rinse out the tank.

Clean internal components: Pump hot water through the soap dispenser until a clean flow of water comes out of the valve.

To change soap, pour out all of the soap from the dispenser. Rinse the dispenser with hot water several times until all residue is removed. Pump the valve until clean water appears. Rinse the dispenser with ethyl alcohol; air dry before refilling.